Module 9:
Performing HIV Rapid Tests

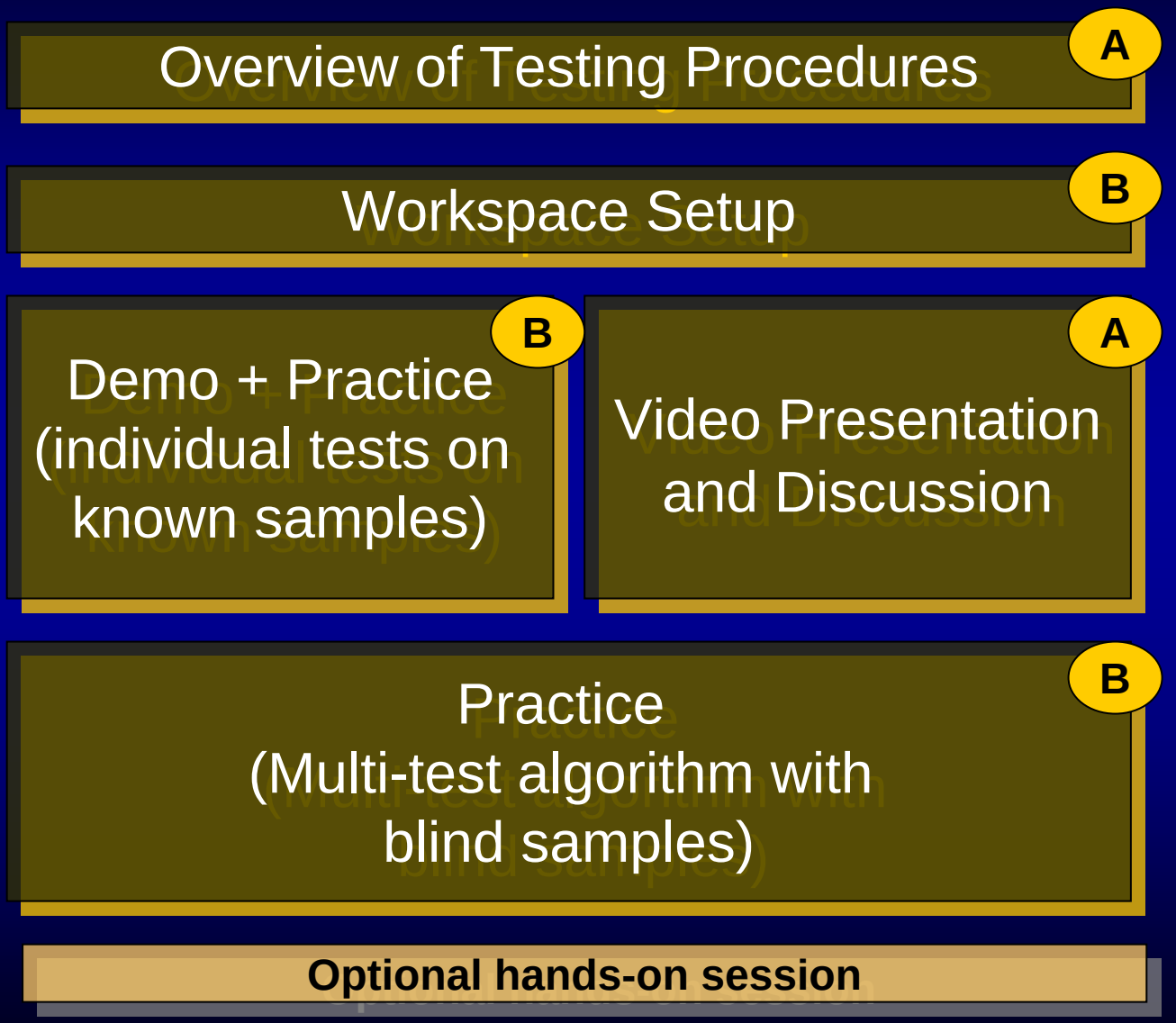
Demonstration and Practice

Learning Objectives

At the end of this module, you will be able to:

- Perform 3 HIV rapid tests according to SOP
  - Insert Test 1 name
  - Insert Test 2 name
  - Insert Test 3 name
- Perform multiple tests simultaneously
- Accurately interpret individual test results
- Accurately determine HIV status

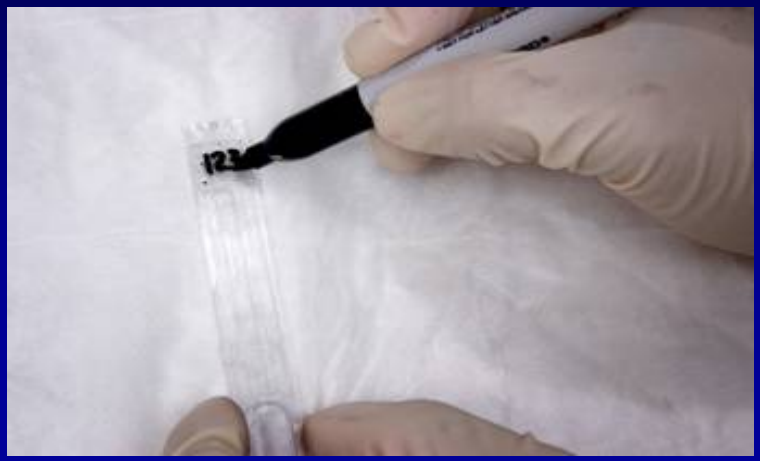
Content Overview



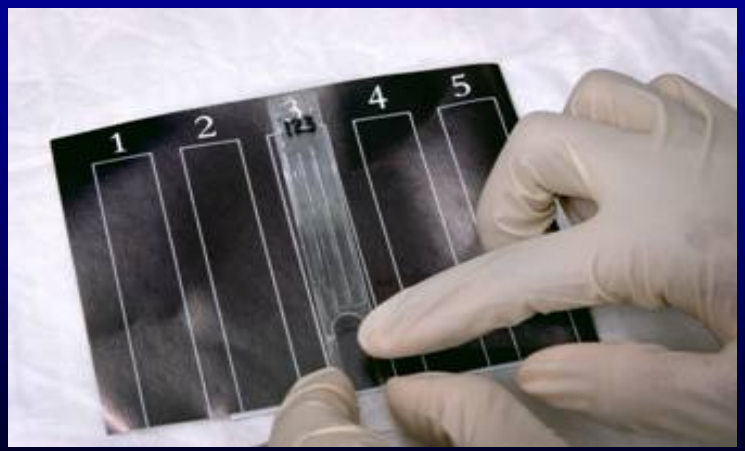
Capillus

Capillus: Getting Ready

1. Collect test items and other necessary lab supplies



2. Label the device with client identification number

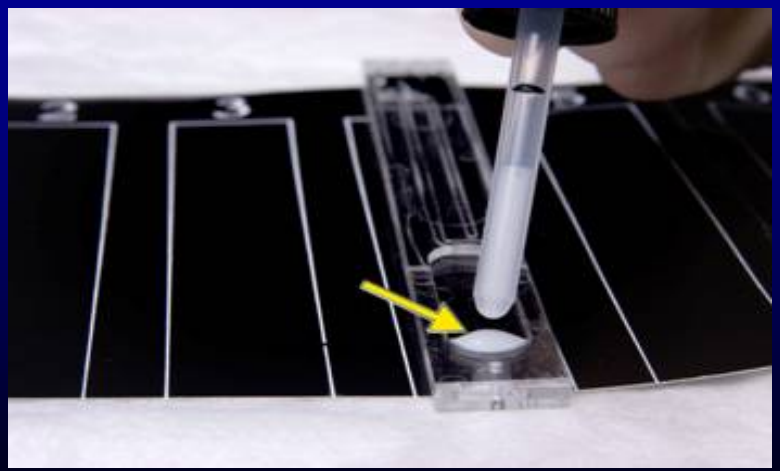


3. Place slide on the black interpretation card . Ensure that slide is right side up.

Capillus: Reagent Preparation

4. Gently mix the latex reagent well ensuring that it is homogenous

5. Use the dropper to draw the latex reagent up to the calibration mark. Avoid drawing up air bubbles.

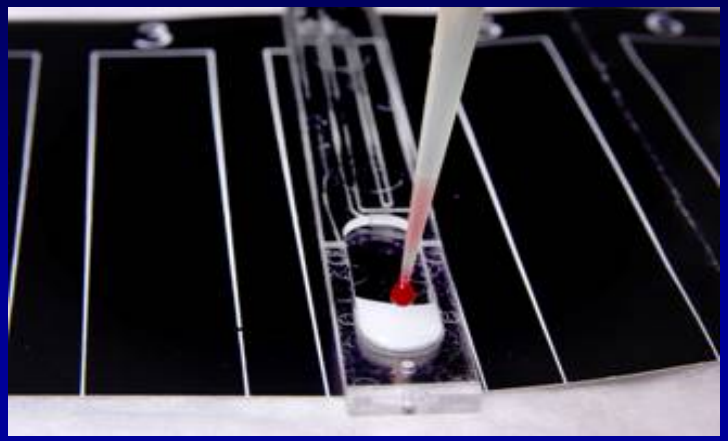


6. Dispense the reagent into the mixing well, away from the capillary channel. Do not allow the dropper to touch the slide.

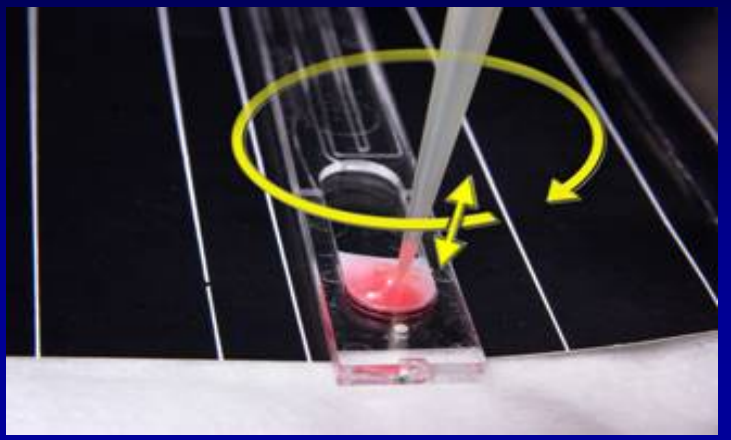
Capillus: Collecting Specimen

7. **Collect 10 µl of specimen using a new disposable pipette tip with the pre-calibrated pipette.**

Capillus: Applying Specimen to Test Slide



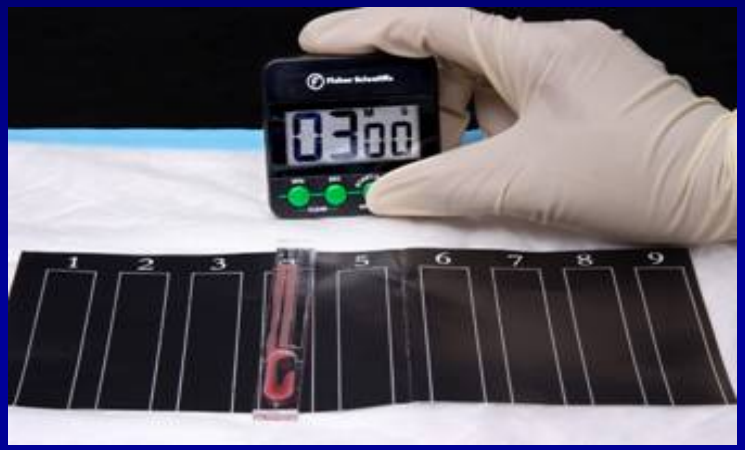
8. Hold the pipette directly over the well and dispense the specimen directly into the latex solution



9. Mix the specimen and latex by gently pumping the mixture in and out of the tip 3 times. Stir in a circular motion at least 5 times.

10. Initiate the capillary flow by moving the mixture to the opening of the channel using the pipette.

Capillus: Getting Results



11. Allow the latex mixture to flow through the entire channel and into the viewing window (about 3-7 min.) before reading the results.

12. Read and record the results and other pertinent info on the worksheet.

Capillus – Test Interpretation

Non-reactive

Reactive

Determine

- Lab workers
- Health workers
- Counselors

Determine: Getting Ready

1. Collect test items and other necessary lab supplies

2. Use 1 strip per test and be sure to preserve the lot number on the remaining packet of strips

3. Label the test strip with client identification number

4. Pull off the protective foil cover

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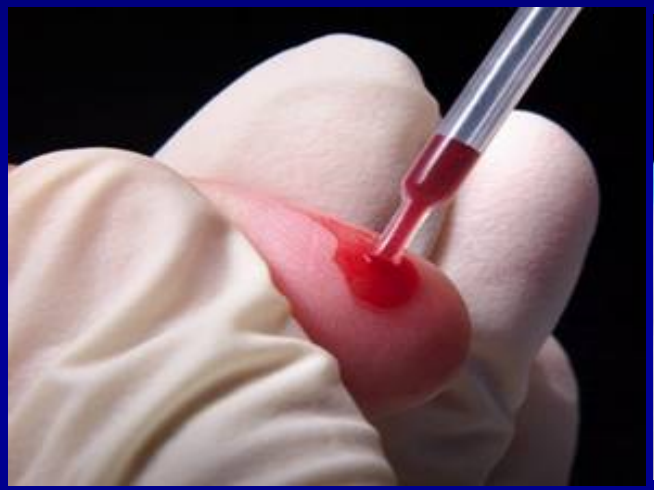
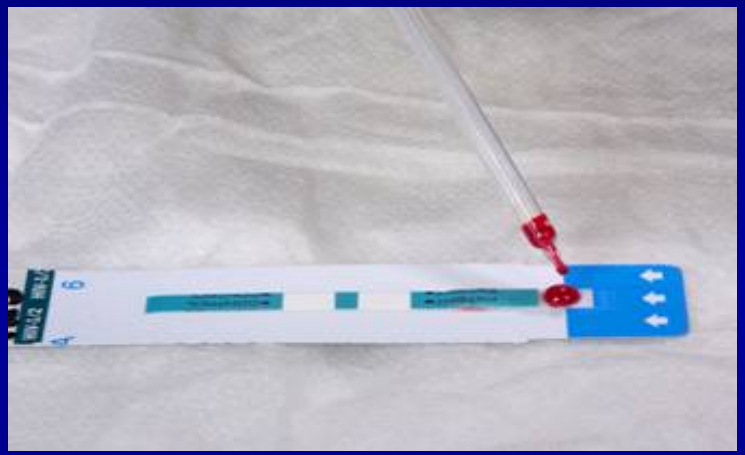
Determine: Collecting Specimen



5. Collect 50 µl of specimen using a precision pipette or 1 drop using a plastic transfer pipette

Determine: Applying Specimen and Buffer to Test Strip



6. **Apply the specimen to the absorbent pad on the strip**

7. **<u>For whole blood only</u> add 1 drop of chase buffer to the specimen pad**

Determine: Getting Results

8. Wait 15 minutes (no longer than 60 minutes) before reading the results

9. Read and record the results and other pertinent info on the worksheet

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Determine - Test Interpretation

Reactive

Non-reactive

Invalid

Hema-Strip

Hema-Strip: Getting Ready

1. Collect test items and other necessary lab supplies

2. Label device with the client identification number

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Hema-Strip: Collecting Specimen

3. Collect specimen directly from the finger-stick. Touch specimen with device tip until tip is full.

Hema-Strip: Buffer Preparation

4. Remove buffer vial – separate from top of device

5. Place buffer vial on a flat surface

Hema-Strip: Applying Specimen and Buffer to Test Strip

6. Firmly press the device tip through the foil cover. Continue pushing device, usually 2 more times, to the bottom of vial until device and buffer vial snap together tightly.

7. Place the test device upright in a rack

Hema-Strip: Getting Results

8. **Wait 15 minutes before reading the results**

9. **Read and record the results and other pertinent info on the worksheet**

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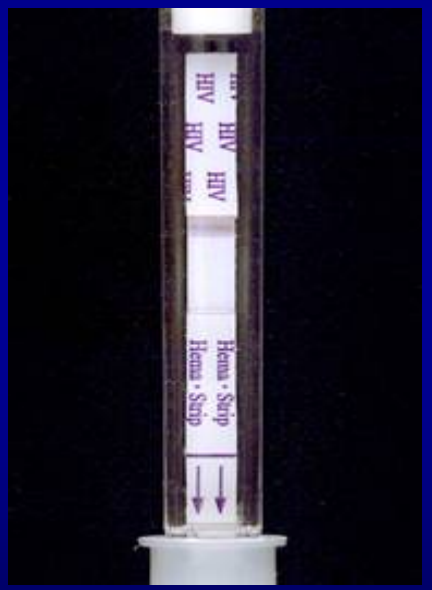
Hema-Strip: Test Interpretation

Reactive

Non-reactive

Invalid



OraQuick

OraQuick: Getting Ready

1. Collect test items and other necessary lab supplies

2. Set reusable stand on a flat, level surface. Partially remove device from package and label device and the developer vial with client identification number.

3. Carefully uncap the developer vial and place vial into the stand

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OraQuick: Collecting Specimen (Blood or Oral Fluids)

4. Collect approximately 5 µl of specimen using a new disposable loop

4. Instruct the client to use the pad end of the test device to swab completely across the outside of the upper and lower gums, one time around

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OraQuick: Transferring Specimen (Blood Only)

5. Transfer the collected specimen to the vial

6. Stir the specimen in the vial with t he loop

OraQuick: Inserting Test Device Into Buffer Vial

7. **Insert the device pad completely into the vial with the result window facing forward**

OraQuick: Getting Results

8. Wait 20 minutes (no longer than 40 min.) before reading the results

9. Read and record the results and other pertinent info on the worksheet

OraQuick: Test Interpretation

Reactive **Non-reactive** **Invalid**

- Lab workers
- Health workers
- Counselors

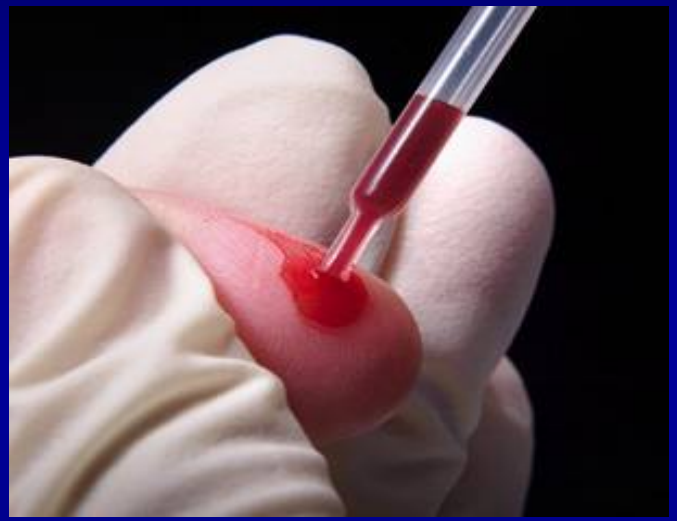
Uni-Gold

Uni-Gold: Getting Ready

1. Collect test items and other necessary lab supplies

2. Remove device from package and label device with client identification number

Uni-Gold: Collecting Specimen



3. Collect specimen using the disposable pipette

Uni-Gold: Adding Specimen and Reagent to Test Device

4. **Add 2 drops (approx. 60µl) of specimen to the sample port in the device**

5. **Add 2 drops (approx. 60µl) of the appropriate wash reagent to sample port**

Uni-Gold: Getting Results

6. Wait for 10 minutes (no longer than 20 min.) before reading the results

7. Read and record the results and other pertinent info on the worksheet

Uni-Gold: Test Interpretation

Reactive

Non-reactive

Invalid

Activity: Workspace Setup

Instructions:

- Identify your Workspace in the practical room
- Gather test kits and supplies
- Obtain reactive and non-reactive specimens from instructor
- Arrange all items at your work station

Activity time: 10 minutes

Hands-On Practice: Individual Tests

Instructions:

- Use safety precautions
- Practice with blood provided by your instructor only
- Raise your hand if you need additional supplies
- Show your test results to instructor after you are done

Total time: 15 minutes per test

Video Presentation and Discussion

Video: Capillus

Key learning points

- What preparation is required for the test kit before testing?
- What are the components in the test kit?
- What are controls for? How do you use them?
- What information needs to be recorded, and where?
- How should you position the slide? Why do you place the slide on a black interpretation card?
- How do you collect blood? What device do you use?
- How long do you set the timer?
- How many results are possible? How do you read them?

Video: Determine

Key learning points

- What preparation is required for the test kit before testing?
- What are the components in the test kit?
- What do you need to preserve when tearing test strip form the packet?
- What information needs to be recorded, and where?
- How do you collect blood? What device do you use?
- Which step can you omit when using serum or plasma?
- How long do you set the timer?
- How many results are possible? How do you read them?

Video: Hema-Strip

Key learning points

- What preparation is required for the test kit before testing?
- What are the components in the test kit?
- When you open the test packet, what do you need to check?
- What information needs to be recorded, and where?
- How do you collect blood? What device do you use?
- How long do you set the timer?
- How many results are possible? How do you read them?

Video: OraQuick

Key learning points

- What preparation is required for the test kit before testing?
- What are the components in the test kit?
- What information needs to be recorded, and where?
- How do you collect blood? What device do you use?
- How do you collect oral fluids? What device do you use?
- How long do you set the timer?
- How many results are possible? How do you read them?

Video: Uni-Gold

Key learning points

- What preparation is required for the test kit before testing?
- What are the components in the test kit?
- What information needs to be recorded, and where?
- How do you collect blood? What device do you use?
- How long do you set the timer?
- How many results are possible? How do you read them?

Video: Multiple HIV Tests

Key learning points

- What are the advantages of performing more than one test at a time?
- Why must you keep two test kits separate when performing both at the same time?
- Do you collect blood at the same time or separately when performing multiple tests?
- How do you set the timer when two tests require different wait time?
- When is a tie-breaker used? How does it determine HIV status?

Country Algorithm

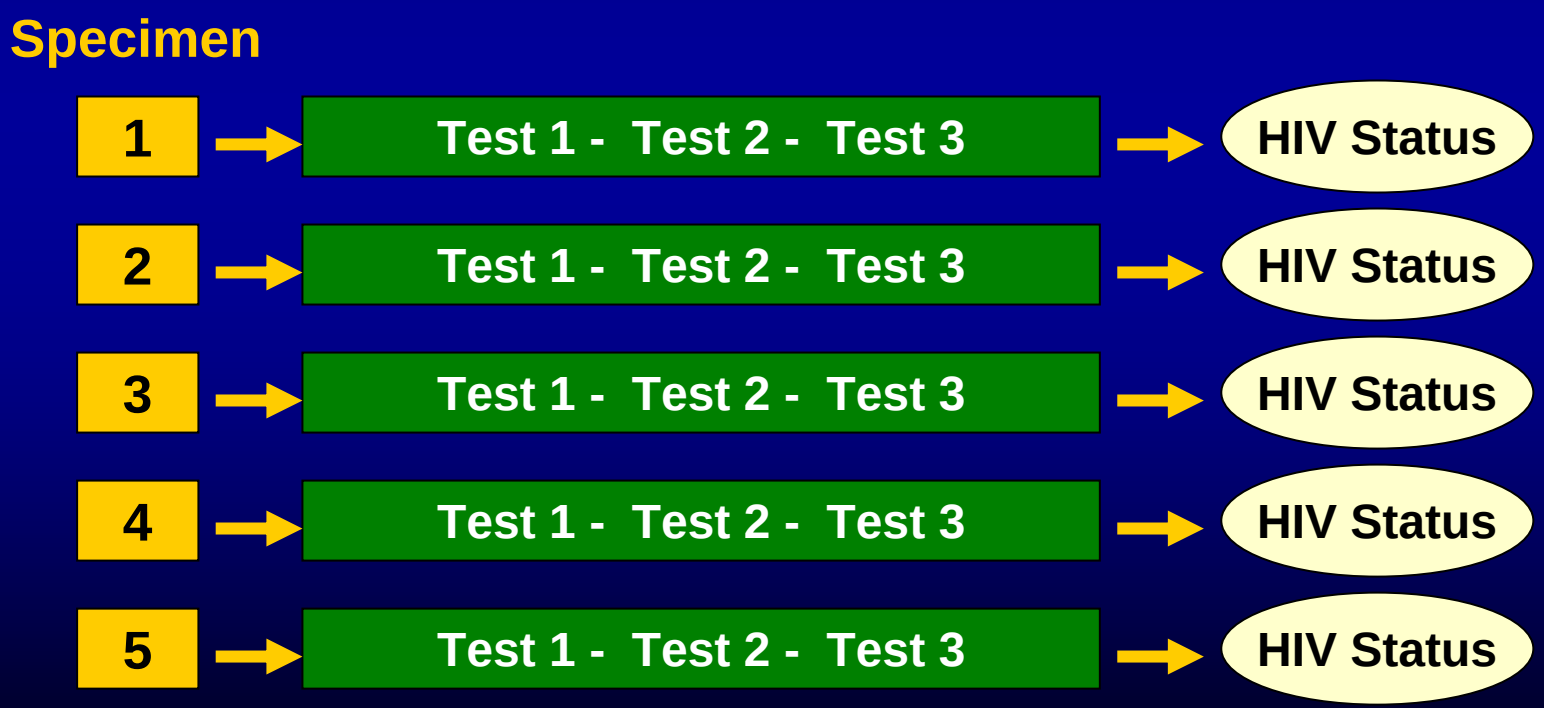
- *Display approved country algorithm here*

Possible Outcomes in a Parallel Algorithm

TEST 1	TEST 2	TEST 3	HIV Status
Non-reactive	Non-reactive		Negative
Reactive	Reactive		Positive
Non-reactive	Reactive	Non-reactive	Negative
Reactive	Non-reactive	Non-reactive	Negative
Non-reactive	Reactive	Reactive	Positive
Reactive	Non-reactive	Reactive	Positive

Hands-On Practice: Multi-Test Algorithm

Conduct test 1 and test 2 simultaneously following the multi-test algorithm. Perform the algorithm using the 5 designated blind specimens and determine HIV status of each.



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Hands-On Practice: Multi-Test Algorithm (Cont'd)

Instructions:

- Collect supplies and obtain panel of blind specimens
- Organize your workspace
- Complete one algorithm before starting the next
  - Don't forget – Use safety precautions
  - Practice on blood provided by your instructor only
  - Raise your hands if you need additional supplies
- Record results on worksheet
- Keep test devices - instructor will check results before discarding of devices

Total time: 2 hours

Summary

- Describe the key learning from performing:
  - (In-country test 1)
  - (In-country test 2)
  - (In-country test 3)

- Describe the key learning from performing the multi-test algorithm